

# Epiglottic Calcification, A Rare Cause of Dysphagia

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## Background

- Causes of dysphagia can vary from *mechanical obstruction to inflammation, infection, neurological disorder, functional*.
  - About 20% of general population are affected, while up to 50-65% of elderly population are affected.<sup>1</sup>
  - The three phases of swallowing are oral (preparatory), oropharyngeal (transfer), and the esophageal phase.
  - Pathologic processes leading to dysphagia can occur in any of these phases.
  - Most cases of dysphagia predominate in the oropharyngeal region with the remainder caused primarily by esophageal pathologies.<sup>2</sup>
- While various causes of oropharyngeal dysphagia have been reported, it is critical to *identify the underlying cause* of dysphagia to improve the clinical outcome.
- Epiglottic calcification** is one of the rare causes of oropharyngeal dysphagia. Only a handful of cases are published in the literature so far. Little is known of its diagnosis, and treatment.
  - The epiglottis is known to mechanically prevent food from entering the airway during the pharyngeal phase of swallowing.
  - Pathologic changes (i.e. calcification) that limits the movement of epiglottis can present as dysphagia or possibly aspiration.*<sup>3</sup>

## Case Description

### Presentation

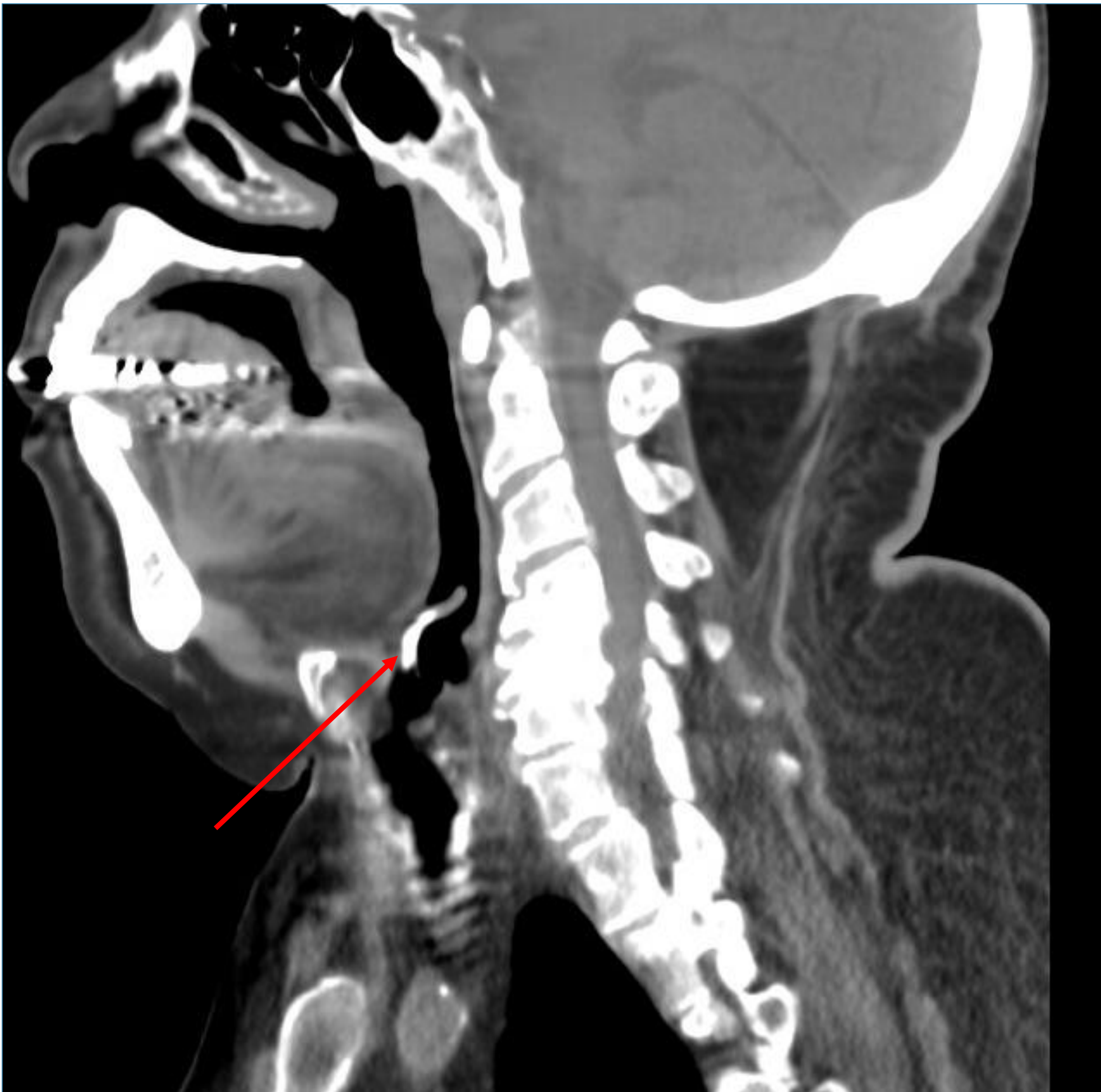
- An 81-year-old male with history of chronic kidney disease, calcific aortic stenosis, and carotid artery stenosis presented with gradually worsening dysphagia over the course of 1 month.
- Patient reported significant difficulty swallowing initially to solids followed by liquids. He reported globus sensation with liquids.
- His appetite decreased due to the discomfort, and he lost over 50 pounds of weight.

### Diagnosis

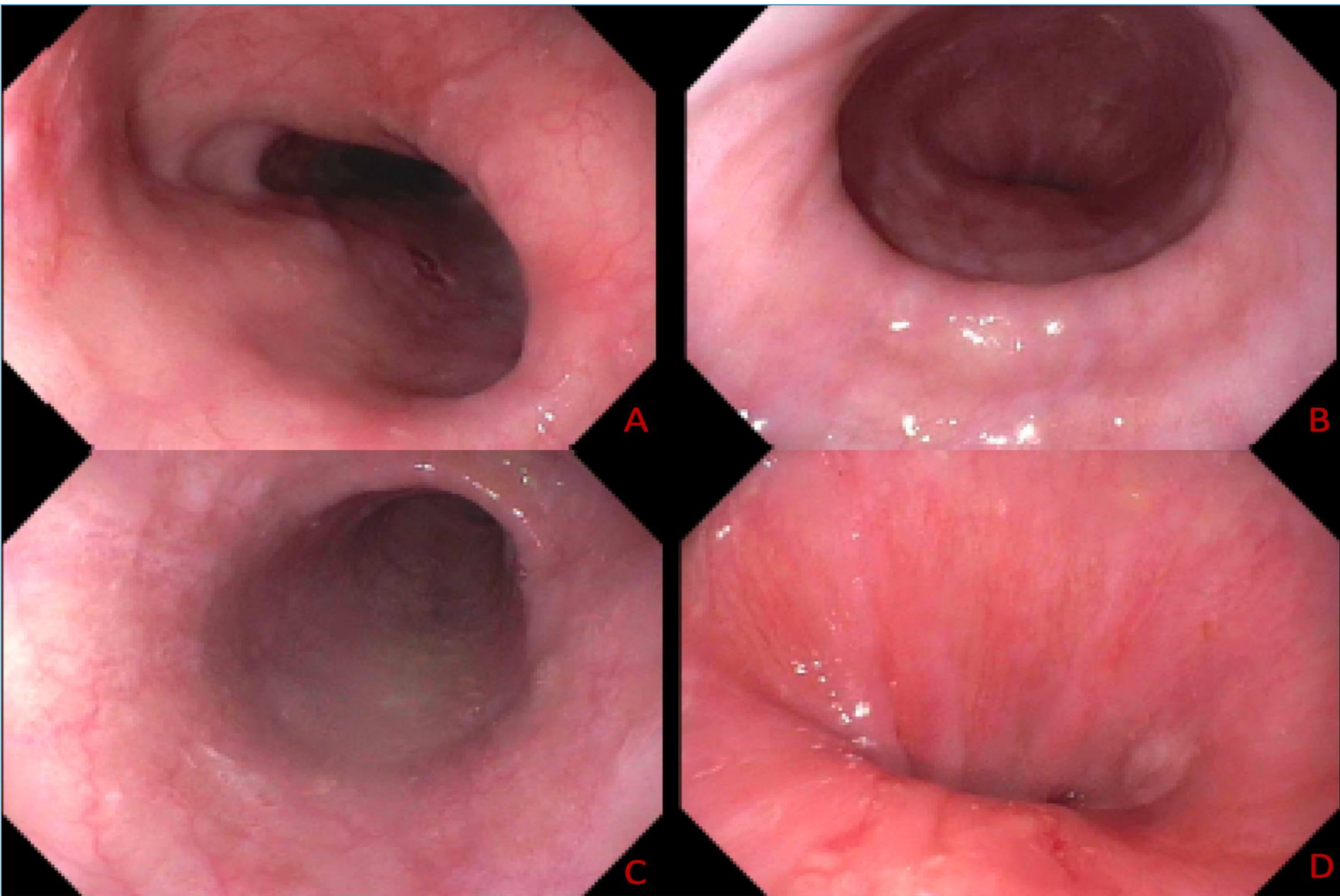
- Physical exam of oropharynx, neck, and abdomen were unremarkable.
- Bedside swallow evaluation suggested mildly decreased hyolaryngeal movement during the oropharyngeal phase, but no other significant abnormalities were identified.
- A Barium swallow study revealed incomplete epiglottic excursion during the pharyngeal phase of swallowing.
- Patient subsequently underwent contrast-enhanced esophagogram. The study showed severe esophageal dysmotility and reflux and delayed emptying in the upper esophagus.
- Contrast CT of head and neck demonstrated marked calcification of epiglottis without epiglottal enlargement.
- Via ENT, the patient underwent flexible fiberoptic laryngoscopy. No masses or lesions were seen in the nasopharynx, oropharynx or hypopharynx.
- Patient also underwent EGD with biopsy. No esophageal or gastric pathology were identified from EGD.

### Clinical Decision

- No definitive treatment modality was outlined despite evaluation.
- Patient was started on a modified diet with ongoing speech and swallow therapy with outpatient follow up.



**Figure 1.** Calcification of epiglottis (Red arrow) on CT of head and neck.



## Discussion

- Epiglottic calcification** is a rare cause of dysphagia that is poorly understood in its etiology, clinical course and outcomes. With our case, we hope to add to literature a unique presentation and imaging.
- Currently there is no clear evaluation process or treatment modality for this condition.
  - In our case, diagnosis was made by radiologic evaluation and exclusion of other causes.
  - Speech and swallow therapy, dietary modification are the only available recommendations
- Some literature suggest surgical intervention (i.e. surgical flap, epiglottopexy) to manage severe symptomatic cases.<sup>4</sup> Yet, further study of this pathology is needed in the future.

**Figure 3 (right).** Esophagogram. Prolonged pooling and delayed emptying of contrast in the upper esophagus. No evidence of stricture or mass lesion in the esophagus.

**Figure 2 (left).** EGD showing normal esophagus. (A) Upper third, (B) Middle third, (C & D) Lower third.



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## References

- Johnston BT. Oesophageal dysphagia: a stepwise approach to diagnosis and management. *Lancet Gastroenterol Hepatol.* 2017 Aug;2(8):604-609. doi: 10.1016/S2468-1253(17)30001-8. PMID: 28691686.
- Chilukuri P, Odufalu F, Hachem C. Dysphagia. *Mo Med.* 2018 May-Jun;115(3):206-210. PMID: 30228723; PMCID: PMC6140149.
- Jeph S, Aidi M, Shah A, Ly TT, Bronov O. Calcification of the epiglottis presenting as foreign body sensation in the neck. *J Radiol Case Rep.* 2017 Jun 30;11(6):1-5. doi: 10.3941/jrcr.v11i6.3093. PMID: 29299092; PMCID: PMC5743143.
- Brookes GB, McKelvie P. Epiglottopexy: a new surgical technique to prevent intractable aspiration. *Ann R Coll Surg Engl.* 1983 Sep;65(5):293-6. PMID: 6614762; PMCID: PMC2494386.
- Marinella MA. An unusual cause of dysphagia. *N Engl J Med.* 1997 May 29;336(22):1612-3. doi: 10.1056/NEJM199705293362218. PMID: 9173267.